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Nuclear Terrorism: Crisis-Ridden Capital Shuns Warning

The current glut of doomsday prophecies on various cosmic subjects probably accounts for the near indifference accorded a recent speech by the director of the Arms Control and Disarmament Agency (ACDA), Fred Ikle. But since he is a cool-headed bureaucrat in a position to know whereof he speaks, let it be noted that he has warned that atomic technology and materials are now so widely dispersed that nuclear terrorism may be virtually unstoppable.

Speaking in Washington to the National Security Industrial Association, Ikle charged that the US needlessly and mindlessly encouraged nuclear dispersion with its Atoms for Peace program, and now faces a situation in which "we are basically defenseless against threats of nuclear attack that could come from a great many different sources rather than from one or two principal adversaries."

"The only way we now know to ward off nuclear attack," he said, "rests on two critical premises: the premise that we need to be concerned with one, or at most a very few, potential nuclear adversaries; and the premise that these potentially hostile nuclear armaments will always be controlled by men who care about the survival of their countries. In a world of widespread nuclear proliferation, certainly one, and perhaps both of these premises would be shattered....

"Imagine the morning after a nuclear explosion has destroyed half of an American city. How are we going to apply our theories of mutual deterrence, of first strike and second strike, of strategic stability conceived for a bipolar world, if we cannot tell whose nuclear explosive it was? Or even if we could tell, but it turned out to be an organization such as might exist in the future — an organization perhaps with dedicated people but no clearly defined national territory - what good then would our more than 2000 nuclear missiles and bombers do?"

Proceeding with his gloomy assessment, Ikle observed that "When a few acts of nuclear destruction had actually occurred, we might not be able to achieve an effective response, and with each new nuclear disaster — or perhaps even threat — our social and political institutions would seem less competent. The moral fiber that binds society would disintegrate further; people would sink into apathy, or a cruel and desperate selfishness, and the nation would cease to act as a viable entity."

Or, he continued, "The nation might decide to protect itself by surrounding itself with an iron curtain, stopping nearly all the flow of goods and people across the borders, rigidly and minutely controlling the rest. Equally rigid and minute controls and surveillance would be instituted internally. In short, we might be driven to establishing a police state. This might protect our country physically, but would destroy it spiritually."

Compared with his estimate of the threat, the element of hope that he held out was slim. "...we do have some time in which to work — not much — but some," he said. And then he launched into the usual stuff about the importance of international nuclear safeguards and the development of security systems.

But in harmony with the schizophrenia that characterizes US policy toward nuclear deals with the rest of the world, Ikle called for giving the Nuclear Non-Proliferation Treaty "all the support we can," while he ignored US offers to provide two non-ratifiers — Egypt and Israel — with nuclear reactors. That offer has apparently gone aground on Congressional skepticism and snags concerning inspection provisions. But the offer, originally made by Nixon, has not been withdrawn by the Ford Administration, nor has it been linked to ratification of the treaty.

Ikle, a Rand Corporation alumnus and protege of

(Continued on page 2)

In Brief

A leaked memo in which the Atomic Industrial Forum details plans for a $1.3-million advertising campaign in behalf of nuclear power has evoked a strong reaction on Capitol Hill. Led by Rep. Ben Rosenthal (D-N.Y.), 31 members of Congress have sent a letter to radio and television stations around the country demanding equal time to explain the hazards of nuclear power if the stations carry any of the AIF's pro-nuclear material.

The amended Freedom of Information Act, which Congress passed over President Ford's veto, is being taken seriously by federal bureaucrats, who now face the possibility of being docked in pay if they drag their feet on legitimate requests for information. An SGR request for some internal documents at a major research agency resulted in the papers being delivered by messenger within a few days. Similar requests in the past usually resulted in weeks of back and forth discussions, sometimes ending with the response that the requested papers were unavailable.

That new pile of money for biomedical affairs, the Robert Wood Johnson Foundation, has awarded Georgetown University $1.3 million to establish a Health Policy Center, with a professional staff of seven, to help formulate health-care policies for state and local governments.

Some 80 faculty members and scientists at MIT have formed an ad hoc committee to support the emigration efforts of several Soviet scientists who have been denied exit visas. According to an MIT announcement, the purpose is to "make it unmistakably clear to the Soviet government that a significant number of scientists are committed to obtaining emigration rights" for the Soviet scientists. Chief organizers are H. Eugene Stanley, professor of health sciences and technology, and Ira A. Michaels, a postdoctoral fellow in the Harvard-MIT Program in Health Sciences and Technology.

Background Investigations Delay Filling of Top ERDA Posts

Having been stung by hastily made nominations that later had to be withdrawn because of politically embarrassing pasts, the Ford Administration is moving with extreme caution in filling the top-level positions of the newly established Energy Research and Development Administration (ERDA). In fact, it's moving so cautiously, that two months after the agency came into existence, the seven presidentially appointed posts below that of Administrator Robert C. Seamans Jr. are still vacant.

ERDA sources say that the only word they have is that five persons are in the advanced stages of being checked out by the White House, but they don't know who they are or which positions they are being considered for. Under the ERDA Act, the President appoints, subject to Senate confirmation, the director and deputy director; also, assistant directors for fossil energy; nuclear energy; environment and safety; solar, geothermal and advanced energy systems; national security, and conservation.

While these presidential positions remain vacant, a number of lesser posts have been filled by Seamans. Among these are:

Director of Congressional Relations, H. Hollister Cantus, former Deputy Assistant Secretary of Defense for House Legislative Affairs.

Director of the Office of Public Affairs, John W. King, former Public Affairs Officer, Johnson Space Center, Houston.

Deputy Assistant Administrator for Fossil Energy, S. William Gouse Jr., former Acting Director of the Office of Coal Research, Department of Interior, and prior to that, Science Advisor to the Secretary of Interior.

Controller, Merwyn C. Greer, former Assistant Controller for Budget, and later Acting Controller, of the AEC.

Assistant Administrator for Administration, Raymond G. Romatowski, former Director for Administration of NASA's Langley Research Center.

Equal Opportunity Director, Marion A. Bowden, former Director of Equal Opportunity at the AEC.

General Counsel, R. Tenney Johnson, former General Counsel of NASA.

Assistant Administrator for International Affairs, Nelson F. Sievering Jr., former Deputy Director of the Bureau of Oceans, International Environmental and Scientific Affairs, State Department.

In Print

The following are current publications of more than routine interest.

The Ethics of Fetal Research, by Paul Ramsey, a "fastback" publication of Yale University Press, scheduled for publication March 17, this topical quickie is slim in many respects other than its mere 104 pages; nevertheless, it pulls together a good deal of useful background material, though the absence of an index is both a nuisance and surprising on the part of an academic press. The author is professor of religion at Princeton University, ($2.95 in paperback; $7.95 cloth.)

NSF Guide to Programs, latest edition of an essential hunting manual; describes NSF's 64 programs, lists criteria for research projects, and includes a current organizational chart of the ever-more-complicated Foundation. (NSF Publication 74-42, single copies available without charge from the Central Processing Section, National Science Foundation, Washington, D.C. 20550; additional copies $1.70 each, Superintendent of Documents, US Government Printing Office, Washington, D.C. 20402; order by stock number 3800-00195.)

Environmental Protection Agency *Indexed Bibliography of Research and Development Reports,* lists 1100 reports issued from 1966 to June 30, 1974 by the office of research and development of EPA and its assorted predecessors. (101 pages, available without charge from the Publication Staff — RD-674 — Office of Program Management, Office of Research and Development, Environmental Protection Agency, Washington, DC 20460.)

The Evaluation of the Performance of Computer Systems, a survey of policies and trends in government use of computers, prepared by the Organization for Economic Cooperation and Development, as part of OECD's series of "informatic studies." (164 pages, $5.50, available in the US from OECD Publications Center, 1750 Pennsylvania Ave. NW., Washington, D.C. 20006; also from OECD sales agents in other countries.)

Ikle *(Continued from page 1)*

Kissinger, may be assumed to be expressing concerns that exist beyond ACDA, which is a part of the State Department. However, with the Administration rigidly committed to the rapid development of nuclear power, and other nations inspired by our example, the Ikle warning — like long ago warnings of the energy and food crises — has come and gone with little response in Washington.

Middle East Grant Chronicle

In the absence of a central meter for clocking the arrival of Middle Eastern grants to American higher education institutions, it is necessary to log this new phenomenon through the announcements of the recipient institutions (SGR Vol. V, No. 4). Latest one we've come across is a $100,000 grant that the Sultan of Oman has awarded for Arabic and Islamic Studies at the John Hopkins University School of Advanced International Studies.

In addition, without specifying the sums involved, Hopkins has also announced that its Medical Institutions have entered into an agreement with the Imperial College of Health Sciences in Iran, whereby 12 Hopkins physicians will work there each for a month or more and staff and students of the College will study at Hopkins for varying periods.

Industry Pressuring US Sea Conference Stance

With the marathon Law of the Sea Conference due to reconvene later this month in Geneva, and chances for substantial agreement generally regarded as slim, US mining and fishery interests are gaining in their efforts to obtain government protection for extensive commercial operations in deep water. If they are successful, the chances for international agreements on exploitation of the seabed and fishing resources are likely to be overwhelmed by national and industrial groups stampeding for competitive advantage.

American industrial interests are staking their hopes on two bills now under Congressional consideration: one would protect the financial stake of US firms engaged in scooping manganese nodules from the deep seabed should an international agreement later restrict them, and the other would extend US jurisdiction over fishing rights from 12 to 200 miles off the coast. Though both measures have been around for some time without attracting substantial support, there is good reason now to take them seriously.

As far as seabed mining is concerned, last year's session of the Law of the Sea Conference, in Caracas, did not even come close to reaching agreement on how commercial exploitation of manganese nodules and other minerals should be regulated. Briefly, delegations from developing nations generally supported the idea of setting up an international body which would license operations on the deep seabed — including research — and collect royalties. Delegations from industrialized countries, on the other hand, were mostly reluctant to give such power to an international body which would inevitably be dominated by the developing nations.

The seabed mining bill, introduced into the Senate February 18 by Lee Metcalf (D-Mont.), should therefore be viewed as a signal to Geneva that the United States is likely to go ahead and establish a licensing scheme for American mining companies if the Law of the Sea Conference fails to reach agreement on an international basis.

It represents a threat to the developing nations because once the US sets up such a scheme, other industrialized countries would be likely to follow suit, each recognizing claims filed by others, thereby establishing an international regulatory mechanism from which the developing nations would be virtually excluded. Furthermore, passage of the bill would violate the spirit of UN resolutions declaring that the riches of the deep seabed are part of the "common heritage" of mankind, rather than assets of industrial consortia.

In any case, Metcalf's bill is identical to legislation passed last year by the Senate Interior Committee (SGR Vol. IV., No. 16). That measure died, however, because the Senate Foreign Relations Committee claimed jurisdiction over it and kept it bottled up until Congress adjourned. But Metcalf has since swept such obstacles away, for he has worked a deal with the chairmen of the Armed Services and Foreign Relations committees which would give them only 30 days to consider the bill once it clears the Interior Committee. After that, it would automatically go on the Senate calendar.

The bill, originally drafted by the American Mining Congress, would set up a licensing scheme, administered by the Secretary of Interior, which would allow American mining companies, on payment of a nominal fee, to conduct exploration and prospecting operations on an exclusive basis over a block of the seabed. Beginning in 1976, the companies would be able to obtain licenses to start commercial mining, and their investment would be insured against any loss that may result from the establishment of an international regulatory mechanism. Metcalf's aides suggest that if no agreement is reached at Geneva, the bill will swiftly be passed by the Interior Committee and brought to a vote in the Senate.

Equally important as far as the Law of the Sea Conference is concerned is the exclusive mining claim on an area of the seabed filed last year by Deepsea Ventures Inc. (SGR Vol. V, No. 1), a leading contender in the seabed mining stakes. That claim indicates that Deepsea is prepared to push ahead with its plans, without waiting for either the Law of the Sea Conference or the United States Congress to act. And, to make sure that its message is heard clearly in Geneva, the company even took out advertising space in the London *Times* in January to announce its claim.

As for the 200-mile fishing limit, a bill sponsored last year by Senator Warren Magnuson (D-Wash.), which was passed by the Senate but not by the House, would have extended US jurisdiction over all fishing within 200 miles of the coastline. Magnuson is preparing to reintroduce the bill this week, and since it will be referred to the Commerce Committee, which he chairs, he is well placed to dictate its progress through the Senate.

In the meantime, the House Committee on Merchant Marine and Fisheries will be holding hearings on a similar measure during the second week in March.

A critical factor in preventing the fisheries bill from being passed last year was that the Department of Defense was opposed to it, but there have recently been unconfirmed rumors that DoD has changed its position. If so, the chances are high that a fisheries protection bill of some sort will emerge from the US Congress this year. The effect on the Law of the Sea negotiations, according to one close observer, would be "catastrophic."

Allergy Report from State

Now that Dixy Lee Ray has moved from the Atomic Energy Commission to the State Department, where she is assistant secretary for oceans, environment, and science, Dixy stories are beginning to come out of Foggy Bottom.

The latest concerns a cigar-smoking British cabinet member who, upon being ushered into her office, was handed an ashtray with the clear indication that Ms. Ray did not care for his habit. "I'm allergic to tobacco smoke," she is reported to have told him, and he snuffed it out.

Following their conversation, as the visitor was about to leave, he pointed to the assistant secretary's ever-present pair of dogs, and curtly observed, "I might have told you that I'm allergic to dogs."

A Curious Speech by the No. 2 Man at EPA

In a little-noted speech that is just now circulating around Washington, the deputy director of the Environmental Protection Agency (EPA) has advised what he refers to as the "establishment" that grassroots passions have subsided and the country's traditional leadership can now take over from the environmental zealots.

The speech, delivered in December by Donald R. Quarles Jr. to the Corporation, Banking and Business Law Section of the Philadelphia Bar Association, may have been a gambit aimed at winning blue-chip support for EPA's eroding political base. But even so, it adds up to a nasty slap at the very people who created the awareness that led to EPA's birth.

"There is a leadership within our country," Quarles said, "a huge group of persons of special responsibility to direct the course of our Nation's industry, government, and other institutions. Collectively, and with some over-simplification, they are known as the Establishment. In the absence of overriding public concern on a subject," he continued, "they exercise great authority over the activities of our society. In many ways, they call the shots."

The Establishment, however, he conceded, cannot claim credit for the environmental movement. "In fact, it has been just the opposite — a grassroots political rebellion by citizens against the persistent failure of industry and government to curb irresponsible practices of environmental abuse...But when it burst forth, the environmental movement was laden with anger and distrust toward an Establishment it accused of sacrificing the environment and public health on the altar of profits and economic growth.

"The legacy of that anger and distrust is found today in the rigid standards, tight deadlines and harsh criminal sanctions that are common place in the environmental statutes. Yet the legacy is broader than that. It may also be found, I would suggest, in the declining popular respect for the institutions of our society."

The "lesson" that Quarles drew from his venture into sociology and politics was that "if the governing institutions of society cannot manage affairs in a way that is acceptable to the public, the public will rise up in protest and demand that changes be made. But when the change is forced in this way, it comes with impatience, with a frustration and with an anger that squeeze out flexibility and moderation and also scatters the seeds of distrust more widely across the land."

Nevertheless, he went on, there is hope, for "Today public fervor on environmental issues has subsided. Control once again has largely returned to the Establishment. The leadership has another chance not to botch the job on the environmental issue."

But, he added, "A danger now exists that the leadership of the country will fail to maintain the momentum of environmental reform which the people in the long run will demand. If this happens, we face the prospect that the environmental movement will once again erupt and rip across this land with a passion and a fury."

All of which is a pretty peculiar bit of analysis on the part of a devotee of environmental purity. It is charming to believe that the "Establishment," having forfeited environmental leadership in times that were economically easier, will now opt for public health and also shun the "altar of profits and economic growth." Establishments, however, don't work that way, and since Quarles isn't so naive as to think they do, the fact that he felt impelled to give this curious speech suggests that EPA is under more pressure than is readily apparent.

House Energy Leader Urges Boost for Fusion Research

Rep. Mike McCormack (D-Wash.), one of the most influential members of the House on energy R&D matters, has, in effect, proposed that fusion research be accorded blank-check treatment. For starters, he thinks that the boost that the Administration is seeking for fusion energy — from $85 million this year to $120 million next year — is inadequate, and he'd like to add still another $20 million. McCormack has also suggested that several major research centers should be given the signal to join in on fusion research.

Since McCormack occupies a key position as chairman of the energy R&D subcommittee of the Science and Technology Committee, and also is a member of the Joint Committee on Atomic Energy (JCAE), he is well placed to push his proposal.

Chief beneficiary of McCormack's proposed increases would be a large fusion test reactor that the Administration has proposed to build at Princeton University. The Administration's budget asks for $7.5 million next year for design studies on the machine, but McCormack reckons that the full $215-million construction cost should be authorized, and that about $23 million should be appropriated next year.

Another member of the JCAE, Republican Senator Clifford Case, of New Jersey, has demonstrated his enthusiasm for the fusion expansion in his home state by introducing a bill that raises spending in line with McCormack's proposal.

In addition, McCormack has suggested that $5 million in construction funds should be authorized to build a neutron source at the Lawrence Livermore Laboratory to aid in developing materials for fusion reactors, and that another $22.1 million should be authorized for a higher flux source to be built at Los Alamos.

Since few other members of Congress know much about fusion, beyond the fact that it may someday provide "limitless, clean energy," McCormack's championship of the program should continue to produce the funds.

Tobacco, Furniture Makers Would Rather Fight than Switch

For any graduate student out there who's looking for a nice case study of the convolutions of government and technology, SGR calls attention to a smouldering controversy involving the Consumer Product Safety Commission and two industrial organizations, the Tobacco Institute and the National Association of Furniture Manufacturers.

Since a lot of upholstery and people go up in smoke because of carelessly handled cigarettes, the Commission has been pushing the development of non-flammable fabrics, in accord with legislation recently adopted by Congress. The Furniture Manufacturers, however, saw another way around the problem — a so-called self-extinguishing cigarette, and they petitioned the Commission to require the tobacco industry to get to work on that idea. The Commission responded that it lacks jurisdiction over cigarettes, though it expressed the hope that the tobacco industry would voluntarily take on the task. The tobacco firms, naturally, cared not one bit for the notion, since it would involve innumerable problems, not the least of which would be vast controversy over the health effects of any extinguishing ingredients that would be added to cigarettes. In response, the Furniture Manufacturers have gone to court to seek to compel the Commission to compel the cigarette manufacturers.

GAO Finds Muddle in US-USSR Science Pact

That much-publicized agreement on scientific cooperation that Mr. Nixon brought back from Moscow in 1972 was plagued during its first 18 months by "poor communications, differing priorities, misunderstandings and security concerns," according to a report prepared by the General Accounting Office (GAO).

Although such problems have always hindered scientific exchanges between the United States and the Soviet Union, and most of them were anticipated, the GAO report states that several projects were delayed because matters which should have been rapidly resolved were not. They included lack of funds, shortages of translation facilities and insufficient travel money for American scientists visiting the Soviet Union.

The report has been received rather cooly in the agencies responsible for implementing the agreement — chiefly the State Department and the National Science Foundation — although responsible officials admit that GAO has correctly identified most of the problems. The chief criticism raised against the report is that it dealt with onlv the first 18 months of the agreement, and things have been working out much better since then.

Moreover, the GAO study dealt with the general science exchanges, the environmental agreement and the space agreement (which it says is working out well), but neglected to study health cooperation, which has usually proceeded smoothly. The State Department, therefore, noted in its comments on the report that the picture may be a little distorted.

The report strongly underlines the fact that international scientific agreements involve more than simple exchanges of off-the-shelf technology, although that's the way the Nixon Administration often presented them to the public.

In general, GAO suggests that during the first 18 months of the agreements, "the exchange of information has been limited and of little technical benefit to the United States," and that over the long term, the balance of the exchange "may favor the Soviet Union." Nevertheless, "political considerations may justify this concession."

As far as funding is concerned, the report suggests that apart from the multimillion dollar space project, lack of funds has hampered cooperation. A major problem is that "no action has been taken to identify funds for the overall agreements, although the scope of the cooperative agreements is of considerable magnitude and may result in substantial outlays of resources." The study therefore recommends that an attempt should be made to assess long-range funding requirements so that they could be authorized in advance by Congress. But the Administration's view is that exchange projects should compete with domestic projects for agency funds, and should not be treated as privileged entities.

One problem especially noted in the report is that there is considerable legal confusion in the United States about the payment of expenses for visits by Soviet delegations. The Soviets have proposed that exchanges should be financed on a "receiving side pays" basis, but under the terms of an act passed by Congress in 1961, only the President can authorize payment of expenses for visiting experts from other countries. Though that authority has been delegated to some agencies, it hasn't to others, and the GAO report states that during the early stages of the agreement, "certain agencies have declined to implement receiving side pays arrangements in the belief that legal authority for such arangements does not exist." All of which was a bit restricting, GAO notes.

Another concern expressed by GAO is that too many projects are being pursued — if a few were given priority, then progress might have been a little swifter. But the State Department noted in its comments that the various proposals have been assessed during the period covered by the report, and priorities have been established since.

In general, the message is that there are serious problems in trying to establish links between systems as different as those in the US and the USSR, but progress is as good as can be expected.

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Rockefeller Sends Advisory Recommendation to Ford

Sidetracked by his later assignment to investigate the CIA, Vice President Rockefeller's study of White House science advice has progressed to the point where an "options paper," with recommendations, has been delivered to President Ford and his chief of staff, Donald Rumsfeld.

The paper, prepared under the direction of Henry Diamond, staff chief of Rockefeller's Commission on Critical Choices, focuses on two principal organizational forms, both of which call for returning science advice to the Executive Office of the President.

The first provides for a "small office," of perhaps a dozen or so staff members, that would be supported principally by the advisory staff that has been built up in the National Science Foundation since Nixon relegated science advice to that agency.

The second calls for a larger office, on the scale of the old Office of Science and Technology, whose professional staff numbered around 30 at the time of its demise.

The paper recommends adoption of the small office setup, but, according to information provided to SGR, does not come out one way or the other on the question of whether the office should be headed by a single adviser to the President, or a Council, probably of three members, which was suggested last year in a National Academy of Sciences study chaired by James Killian Jr., White House science adviser under President Eisenhower. The Council proposal is also contained in Senator Kennedy's far-reaching science-policy bill, S. 32, which was passed by the Senate last year.

With the Vice President heavily occupied with the CIA study, the timetable for the advisory study is uncertain, but things are moving along. Rockefeller plans to confer soon with three of the principal figures involved with the subject, Killian, Kennedy, and Rep. Olin Teague (D-Texas), chairman of the Science and Technology Committee, which, last year, in its previous incarnation as the Science and Astronautics Committee, held extensive hearings on White House science policy organization. Teague's response is crucial, since, unlike Kennedy, he has taken the position that presidential staff affairs cannot be dictated by Congress, but most be worked out in collaboration with the White House.

According to persons associated with the study, one of the principal problems has been the design of the relationship of the science office with the Office of Management and Budget and the National Security Council. The option paper calls for it to have authority to examine matters within the jurisdictions of both, but just how this is to be worked out in an effective fashion has not been fully delineated.

Also reflected in the option paper is a proposal of Donald Rice, president of the Rand Corporation, who, as a member of the Killian study group, urged that re-establishment of a White House science office should be accompanied by provisions for long-range policy planning.

EPA Chief Urges New Advisory Setup

One impetus for the now-pending reorganization of science advice for the White House is the feeling that Congress is better equipped than the Executive branch for trying to look over the horizon on public policy issues, particularly those involving science and technology.

This view was expressed by Russell E. Train, head of the Environmental Protection Agency, in a year-end report to the EPA staff. "In an age of resource scarcities and physical constraints," he said, "...we are, in short, going to have to engage in some serious long-range planning.

"With its new budget committee and the Office of Technology Assessment, the Congress has at least the rudiments of the kind of longer-range analytical capabilities I am thinking of. But nowhere in the Executive Branch is there any real capability for conducting the kind of continuing and comprehensive census of the future that we must have if we are to ensure that day-to-day decisions we make are, indeed, taking us in the directions we want to go. It is, in my view, a matter of the utmost importance that we create such a capability within the national government."

Big Boost in Biology Students

According to the latest compilation of figures from the National Science Foundation, graduate enrollment in biological science departments increased last fall by 17 percent compared with the previous year. The increased enrollment, it should be noted, came at a time when many biomedical scientists were warning that cutbacks in federal support for NIH would deter young scientists from taking up careers in biological research.

Enrollments in other graduate departments stayed roughly constant, however, with the exception of the social sciences, which registered a 4.4 percent increase. Nevertheless, the surge in numbers in the biological sciences has resulted in the first overall increase in graduate enrollments in science and engineering since 1969.

Copies of the report, NSF Publication 74-321, are available without charge from the Division of Science Resources Studies, National Science Foundation, Washington, D.C. 20550.

Chief Appointed for NAS Board

Michael J. Pelczar Jr., vice president for graduate studies and research at the University of Maryland, has been appointed head of the Board of Human-Resource Data and Analyses of the National Research Council's Commission on Human Resources. The Board collects and analyses data on manpower supply and demand and sponsors research on the manpower effects of government programs. The National Research Council is the operating arm of the National Academy of Sciences.

Handler Re-Elected to Academy Presidency

To the surprise of no one and the dismay of many, Philip Handler has been elected unopposed to a second six-year term as president of the National Academy of Sciences.

The election, by mail ballot in January, was preceded by attempts by several academicians and staff members to come up with an alternative candidate, but though discontent with Handler is in ample evidence around the Academy, the efforts foundered on apathy rather than on support for his re-election.

The situation is paradoxical, since many of those opposed to Handler readily concede that under his leadership the Academy has been revitalized through superior staff appointments and an extensive and sensible re-organization of its internal structure. In addition, the quality of the Academy's output has been improved by the creation of a powerful Report Review Committee that has virtual veto power over the issuance of documents bearing the Academy's imprimatur. And conflicts of interest, long a sore point among critics of the Academy, have been minimized by a requirement that prospective panel members must bare all their institutional connections prior to appointment.

On the other side of the ledger is the often-stated complaint that Handler's term has been characterized by a Nixon-style paranoia at the center of power. Members and staff frequently complain that he is petty and peevish, that verbal understandings with him are frequently junked without explanation, and that he relishes the ceremonial trappings of office to an unwholesome extent. At one point, his bickering with now-retired Academy Vice President George Kistiakowsky reached the point where the two simply ignored each other for months at a time. And then there was the occasion last year when he refused to provide a stock photo of himself to the Columbia University *Journalism Review* because it was to accompany an article by the editor of SGR. Finally, to the outrage of some Academy members, Handler last year went out on the speech circuit with a doomsday talk on the food crisis that, because of its rambling nature, unintentionally lent itself to a let-'em-starve interpretation.

Despite last year's talk about bringing out another candidate, the spirit of rebellion was unable to cope with the fact that anyone with sufficient stature to challenge an incumbency in the staid institution was almost certainly more happily occupied elsewhere. What it finally boiled down to was that potential winners weren't interested.

One measure of the effect of Handler's tenure is that a nominating committee for presidency of the National Academy of Engineering — the separate but subordinate sister of the science academy — has been looking for months for a candidate, without any success. The post became vacant at the end of last year when Robert C. Seamans Jr. was confirmed as head of the newly established Energy Research and Development Administration. During his 18 months as NAE president, Seamans, who is tough and tactful, managed to end the squabbling that had characterized relations between the two academies from almost the beginning of their decade-long relationship. But so far, there are no takers for the succession.

New Cost Overruns for Fast Breeder

Mammoth cost overruns on the Liquid Metal Fast Breeder Reactor (LMFBR), centerpiece of the Administration's longrange nuclear power program, continue to provide inviting targets for the Congressional anti-nuclear lobby.

The latest concerns a key portion of the project, the Fast Flux Test Facility (FFTF), a test reactor under construction in Hanford, Washington. Though Administration officials contend that inflation and definitional differencs are mainly the cause, Rep. Les Aspin (D-Wisc.) has charged that the cost of the FFTF has now risen from an original estimate of $85.5 million to about $610 million.

Confirmation of at least some cost problems with the FFTF was provided during a press briefing last month on the budget request for the Energy Research and Development Administration (ERDA), which took charge of the LMFBR program earlier this year. ERDA Administrator Robert C. Seamans Jr. announced that the project was being reviewed, and that it seemed likely that ERDA will have to ask Congress for more money.

The balooning costs of the FFTF, coupled with the $1-billion overrun predicted by the AEC last year for the LMFBR demonstration plant under construction at the Holifield National Laboratory in Tennessee, are sure to be used as a powerful argument against the LMFBR when ERDA's budget comes up for debate in Congress. Aspin has already noted that the new cost estimates "raise again the question of how much of our total energy R&D budget we want the breeder to take."

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New Scientific Exchanges with China Announced

Agreements for scholarly exchanges with the People's Republic of China are coming out of the negotiating mill again, following a period of sluggishness that was causing some anxiety on the American side.

Newly announced agreements for this year provide for the following visits this year by Chinese delegations: solid state physics, March; molecular biology, May; communications techniques, June; petro-chemical industry, August; a delegation of the Scientific and Technical Association, which administers the exchange program, September; industrial automation, October, and immunology, November/December.

American groups will visit China as follows: schistosomiasis, April; paleoanthropology, May; rural small-scale industry, June; insect control, August, and solid state physics, tentatively scheduled for September.

The exchange program is administered in the US by the Committee on Scholarly Communication with the People's Republic of China, which was formed in 1966 by the American Council of Learned Societies, the Social Science Research Council, and the National Academy of Sciences. Details on these exchanges and others that are being planned may be obtained from the Committee, which is located at the Academy, 2101 Constitution Ave. NW., Washington, DC 20418.

Commerce Advisory Board Takes up Science Issues

One of the less-known but more interesting and diligent advisory groups in Washington is the Commerce Technical Advisory Board, which has been rejuvenated into activity by Betsy Ancker-Johnson, Assistant Secretary of Commerce for Science and Technology.

Like many advisory bodies, the Board, which usually meets monthly, is not a starter or a stopper of events — the usual measure of power in Washington; but under Ancker-Johnson's leadership, it has reached far and wide into the scientific and technical community for membership, and its meetings — all open to the public — usually provide a good short course on current problems of science and government and related matters. In recent months, the Board has concentrated on preparing a critique of federal energy planning, which is probably a waste of time, since the backlog of unread government energy reports could probably heat all of Washington for an appreciable time. It has also heard various specialists on such subjects as international technological transfer and barriers to innovation. To get the list for meetings and agendas, write to Ancker-Johnson's office, US Department of Commerce, Room 3877, Washington, D.C. 20230. Telephone: (202) 967-2394.

The other members of the Board are: Richard Morse, MIT Development Foundation; William Carey, American Association for the Advancement of Science; Paul F. Chenea, General Motors; Donald W. Collier, Borg-Warner; John Collins, Sloan School, MIT; Richard H. Demmy, UGI Corp.; Thomas Fox, Carnegie-Mellon University; Melville W. Gray, Kansas State Dept. of Health; Willis W. Harman, Stanford Research Institute; Henry K. Hebeler, Boeing Company; Arthur Kantrowitz, AVCO Corp.; Willie L. Leftwich, attorney, Washington, D.C.; Albert Monnett Jr., US Steel; William J. Pietenpol, consultant, Winnetka, Ill.; Malcolm E. Pruitt, Dow Chemical; Martha Sager, American University; Sheldon W. Samuels, AFL-CIO.

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